

REMARKS

The office action of February 3, 2011, has been carefully considered.

It is noted that claims 1-5 are rejected under 35 U.S.C. 112, first paragraph.

Claims 1 and 4-5 are rejected under 35 U.S.C. 103(a) over the patent to Robotham in view of the WO 02/074461 to Keller et al.

Claims 1 and 4-5 are rejected under 35 U.S.C. 103(a) over Keller et al. in view of Robotham.

Claim 2 is rejected under 35 U.S.C. 103(a) over Robotham and Keller et al. in view of the patent to Draskovitch et al.

Claim 3 is rejected under 35 U.S.C. 103(a) over Robotham and Keller et al. in view of the patent to Yoshida.

Claim 2 is rejected under 35 U.S.C. 103(a) over Keller et al. and Robotham, further in view of Draskovitch et al.

Claim 3 is rejected under 35 U.S.C. 103(a) over Keller et al. and Robotham, further in view of Yoshida.

In view of the Examiner's rejections of the claims, applicant has amended claim 1. Support for the change to claim 1 can be found at page 5, lines 5-7 of the specification.

Applicant submits that the subject matter contained in the claims is described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

As has been previously argued, the term "roller-burnished" is known in the art and implies a specific structural characteristic of the sealing surface. "Roller-burnished" is used to describe a structural feature of the sealing surface of the sealing ring, just as, for example, a material can be defined to have a "textured", "embossed" "knurled" or "coated" surface.

The roller-burnishing of the cylindrical component describes an entirely unique method for the smoothing and hardening of surface materials. Additionally, special tools are required,

which for example have a roughened work surface, as well as a smooth surface, and with an appropriate pressure device that is pressed against the work piece. When pressure is exerted, the pressure device exerts a pressure force in the area of the contact surface between the pressure tool and the work pieces being worked on, which leads to a deformation and simultaneous hardening of the outer surface of the work piece. Depending on the profiling of the pressure tools, for example: smooth or profiled, a specific surface structure is simultaneously pressed in. These processes are applied usually for the production of for example: knurled screws, to provide the knurling on the screws.

The roller-burnishing describes essentially a process for the production of a particular surface structure, indeed the component and the surface of the component, respectively, produced using said process have an entirely unique surface structure. Hence, Claim 1 recites that the sealing surface of the sealing ring for roller bearings is roller-burnished, i.e. the sealing ring has a roller-burnished surface. This attribute is thus a structural feature, not simply a process limitation. Although the references teach a hard sealing surface, they do not teach a roller-burnished surface and the structure associated

therewith.

Applicant is not broadly claiming a hard sealing surface, but instead a surface that has specific structural characteristics, namely a roller-burnished surface. Such a surface is inherently hard. If applicant were simply claiming a "hard" sealing surface without any further description then the rejection might be appropriate. However, applicant is not making such a broad claim. Instead, a specific type of hard surface is being claimed.

In view of these considerations it is respectfully submitted that the rejection of claims 1-5 under 35 U.S.C. 112, first paragraph is overcome and should be withdrawn.

It is respectfully submitted that the claims presently on file differ essentially and in an unobvious, highly advantageous manner from the constructions disclosed in the references.

Turning now to the references, applicant incorporates herein by reference all of the arguments presented in previous amendments. The references do not teach or suggest a sealing ring having a cylindrical, roller-burnished sealing surface, as in the

present invention. The following additional arguments are presented.

The patent to Robotham does not disclose a ring fastened to the neck bush, as in the presently claimed invention. Furthermore, the reference does not disclose a sealing element as recited in amended claim 1. Thus, Robotham does not disclose a roller-burnished sealing surface, a ring fastened to the neck bush or a sealing element having two arms that project in a common axial direction, as in the presently claimed invention.

Keller et al. disclose a sealing device for cylinder bearings. Keller et al. do not teach a roller-burnished sealing surface. Thus, a combination of Keller et al. and Robotham does not teach a sealing surface as recited in claim 1 presently on file. Neither reference makes any mention of a sealing surface having the structural characteristics of a roller-burnished surface. These specific structural characteristics provide the intended benefit of the present invention, namely an increased life expectancy of the sealing element and a reduction in roughness. A sealing surface as recited in the presently claimed invention is not taught by the cited references.

The roller-burnished sealing surface is not merely a process limitation but instead defines specific structural characteristics of the sealing surface, which are not taught by the references.

In view of these considerations it is respectfully submitted that the rejections of claims 1 and 4-5 under 35 U.S.C. 103(a) over a combination of the above-discussed references are overcome and should be withdrawn.

The patent to Draskovich has also been considered. This reference adds nothing to the teachings of Robotham and Keller et al. so as to teach the presently claimed invention as discussed above in connection with claim 1.

In view of these considerations it is respectfully submitted that the rejections of claim 2 under 35 U.S.C. 103(a) are overcome and should be withdrawn.

The patent to Yoshida discloses a seal structure for relatively rotational members. This reference adds nothing to the teachings of Robotham and Keller et al. so as to teach the presently claimed invention as discussed above in connection with claim 1.

In view of these considerations it is respectfully submitted that the rejections of claim 3 under 35 U.S.C. 103(a) over a combination of the above-discussed references are overcome and should be withdrawn.


Reconsideration and allowance of the present application are respectfully requested.

Any additional fees or charges required at this time in connection with this application may be charged to Patent and Trademark Office Deposit Account No. 02-2275.

Respectfully submitted,

LUCAS & MERCANTI LLP

By

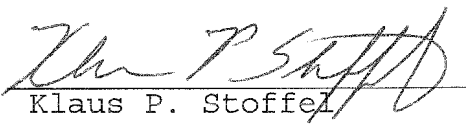
  
Klaus P. Stoffel  
Reg. No. 31,668  
475 Park Avenue South  
New York, New York 10016  
(212) 661-8000

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Klaus P. Stoffel

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